TL074, QUAD LOW-NOISE JFET-INPUT GENERAL-PURPOSE OPERATIONAL AMPLIFIER

Device Status: Active

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Parameter Name	TL074
delta VCC (max) (V)	36
delta VCC (min) (V)	7
IDD / ICC per channel (max) (mA)	2.5
IDD / ICC per channel (typ) (mA)	1.4
GBW (typ) (MHz)	3
Slew Rate (typ) (V/us)	13
VIO (Full Range) (max) (mV)	13
VIO (25 deg C) (max) (mV)	10
IIB (typ) (pA)	65
CMRR (typ) (dB)	100
Vn (typ) (nV/rtHz)	18
Number of Channels	4
Spec'd at VCC (V)	+/-15

Description

The JFET-input operational amplifiers in the TL07_ series are designed as low-noise versions of the TL08_ series amplifiers with low input bias and offset currents and fast slew rate. The low harmonic distortion and low noise make the TL07_ series ideally suited for high-fidelity and audio preamplifier applications. Each amplifier features JFET inputs (for high input impedance) coupled with bipolar output stages integrated on a single monolithic chip.

The C-suffix devices are characterized for operation from 0°C to 70°C. The I-suffix devices are characterized for operation from -40°C to 85°C. The M-suffix devices are characterized for operation over the full military temperature range of -55°C to 125°C.

‡ The D package is available taped and reeled. Add the suffix R to the device type (e.g., TL071CDR). The PW package is only available left-ended taped and reeled (e.g., TL072CPWLE).

Features

- Low Power Consumption
- Wide Common-Mode and Differential Voltage Ranges
- Low Input Bias and Offset Currents
- Output Short-Circuit Protection
- Low Total Harmonic Distortion
- 0.003% Typ
- Low Noise
- V_n = 18 nV/√ Hz\ Typ at f = 1 kHz
- High Input Impedance...JFET Input Stage
- Internal Frequency Compensation
- Latch-Up-Free Operation
- High Slew Rate...13 V/us Typ
- Common-Mode Input Voltage Range Includes V_{CC+}

To view the following documents, Acrobat Reader 3.x is required.
To download a document to your hard drive, right-click on the link and choose 'Save'.

Datasheets

Full datasheet in Acrobat PDF: slos080d.pdf (281 KB)
Full datasheet in Zipped PostScript: slos080d.psz (251 KB)

Pricing/Samples/Availability

Orderable Device	Package	Pins	Temp	Status	Price/unit USD (100-999)	Pack Qty	DSCC Number	Availability / Samples
JM38510/11906BCA	J	14	M	ACTIVE	31.73	1		Check stock or order
TL074CD	D	14		ACTIVE	0.60	50		Check stock or order
TL074CDBR	DB	14		ACTIVE				Check stock or order
TL074CDR	D	14		ACTIVE	0.53	2500		Check stock or order
TL074CN	N	14		ACTIVE	0.60	25		Check stock or order
TL074CNS	NS	14		ACTIVE				Check stock or order
TL074CNSR	NS	14		ACTIVE	0.59	2000		Check stock or order
TL074CPWLE	PW	14		OBSOLETE				
TL074CPWR	PW	14		ACTIVE	0.50	2000		Check stock or order
TL074ID	D	14		ACTIVE	0.80	50		Check stock or order
TL074IDR	D	14		ACTIVE	0.70	2500		Check stock or order
TL074IJ	J	14		OBSOLETE				
TL074IN	N	14		ACTIVE	0.80	25		Check stock or order
TL074MFKB	FK	20	M	ACTIVE	15.11	1	81023062A	Check stock or order
TL074MJ	J	14	M	ACTIVE	4.38	1		Check stock or order
TL074MJB	J	14	M	ACTIVE	6.41	1	8102306CA	Check stock or order
TL074MWB	W	14	M	ACTIVE	11.69	1	8102306DA	Check stock or order

Application Reports

View Application Reports for Operational Amplifiers

- ANALOG APPLICATIONS JOURNAL (SLYT012A, 781 KB)

- ANALOG APPLICATIONS JOURNAL (SLYT010)
- ANALOG APPLICATIONS JOURNAL (SLYT010A)
- ANALOG APPLICATIONS JOURNAL FEBRUARY 2000 (SLYT012, 781 KB)
- ANALYSIS OF THE SALLEN-KEY ARCHITECTURE (SLOA024A)
- ELECTROSTATIC DISCHARGE APPLICATION NOTE (SSYA008)
- SIGNAL CONDITIONING PIEZOELECTRIC SENSORS (SLOA033)
- SIGNAL CONDITIONING WHEATSTONE RESISTIVE BRIDGE SENSORS (SLOA034)
- STABILITY ANALYSIS OF VOLTAGE-FEEDBACK OP AMPS, INCLUDING COMPENSATION TECHNIQUE (SLOA020)
- THERMAL CHARACTERISTICS OF LINEAR AND LOGIC PACKAGES USING JEDEC PCB DESIGNS (SZZA017A)

User Manuals

- UNIVERSAL OP AMP EVALUATION MODULE SELECTION GUIDE (SLOU060, 10 KB)
- UNIVERSAL OPERATIONAL AMPLIFIER EVM (SLVU006A, 387 KB)
- UNIVERSAL OPERATIONAL AMPLIFIER SINGLE, DUAL, QUAD (MSOP/TSSOP) (SLOU055, 1196 KB)
- UNIVERSAL OPERATIONAL AMPLIFIER SINGLE, DUAL, QUAD (PDIP) (SLOU062, 1211 KB)
- UNIVERSAL OPERATIONAL AMPLIFIER SINGLE, DUAL, QUAD (SOIC) EVALUATION MODULE WITH (SLOU061, 1160 KB)

Table Data Updated on: 3/19/2000